

STANDARDS CHANGES CATALOG (SCC)

SCC NUMBER: SCC #145R3

CHANGE PROPOSAL TITLE: Define Maximum Transmit Time (MTT), Net Busy Time (NBT), Test Time To Live (TTTL) and Join Request Time To Live (JRTTL), update Chapter 3 (Definitions) adding missing terms and standardize the units of measure for all parameters in the MIL-STD-188-220 Parameter Table. Make corrections to SCC enclosures.

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ORIGINATOR'S INTERNAL NUMBER: N/A

AFFECTED DOCUMENTS: This change is for MIL-STD-188-220C.

PRECEDENCE: Routine

RECOMMENDATIONS: None

RECORD OF PROCESSING

| <u>DATE:</u> | <u>ACTION:</u> |
|------------------|----------------|
| 8 July 03 | Proposal |
| 8 July 03 | Work Item |
| 16 Oct 03 | R1 |
| 29 Jan 04 | R2 |
| <u>27 Mar 04</u> | <u>R3</u> |

1. STATEMENT OF THE PROBLEM:

The term MTT is used to derive many parameter values but is not fully defined in the MIL-STD. The terms TTTL and JRTTL are not defined or described in the MIL-STD but values are provided in the parameter tables. The units of measurements for the various parameters are inconsistent, some being in seconds, some in minutes, some in tenths of a second and others in milliseconds. Many of the terms used in Appendix C and Appendix E are not provided in the acronym list in Chapter 3.

2. PROBLEM ANALYSIS:

MTT is an exact term in creation of parameter values. The values depend upon a very specific interpretation of MTT. There are multiple definitions that could be utilized to determine the value for MTT, but only one was selected. Therefore the selected definition needs to be clearly defined in the standard. In addition, there are other parameter values defined in the tables that are not mentioned in MIL-STD-188-220 that need to be added and/or terms used that are not defined in Chapter 3. These include, for example, ~~Net Busy Time (NBT)~~, ~~TEST Time To Live (TTTL)~~, ~~Join Request Time To Live (JRTTL)~~, ~~Maximum Transmit Time (MTT)~~, Net Busy Detect Time (NBDT), Coupled Acknowledgment transmission time (S), Tolerance Time (TOL), and Turnaround time (TURN). Further, various terms of measurement are used in the present tables making them inconsistent and confusing. All parameter values will now be defined in seconds, with the exception of Minimum Update Period (MUP) that will remain in minutes. This SCC is intended for 188-220C. Some of the enclosures have headings of 188-220D Draft. Make corrections to enclosures to change headings from 188-220D Draft to 188-220C. Further, some wording in the enclosures needs to be updated.

3. PROPOSED SOLUTION:

Make the following changes.

- a. Add a definition of MTT as first paragraph in 5.3.8.1.1 in basic document, bump up numbering for the existing 5.3.8.1.1, 5.3.8.1.2 and 5.3.8.1.3, move reference to Maximum Number of Octets from 5.3.8.1 to new paragraph 5.3.8.1.1 and add TTTL to paragraph 5.3.8.1.2 (See encl 1 [R2R3](#)). Change heading in the enclosure from 220D Draft to 220C. Also correct reference to Parameter Tables changing from "MIL-STD-188-220 Protocol Parameters and Values" to "MIL-STD-188-220 Parameter Table". [Show actual page numbers from MIL-STD-188-220D.](#)
- b. Add the Acronyms B, DTEACK, DTEPROC, DTETURN, ELAG, EPRE, JRT, JRTTL, MTT, NBDT, NBT, PHASING, RTURN, S, TOL, TTTL, TTURN and TURN to Chapter 3. (See enclosure 2 [R2R3](#)) Change the heading in the enclosure from 220D Draft to 220C. [Show actual page numbers from MIL-STD-188-220D.](#)
- c. Add new paragraph C.3.2.11 to index. (See enclosure 3 [R2R3](#)). Change the heading in the enclosure from 220D Draft to 220C.

- d. Modify figure 32 in Appendix C to clearly identify that MTT is the duration of time from the event “PTT on” to the event “PTT off”. Show actual page number from MIL-STD-188-220D. (see enclosure 4 R3)
- e. Update paragraphs in Appendix C to change milliseconds to seconds and update definition of DTETURN. (See enclosure 5 R2R3) Correct proposed change to C.3.2.9 in the enclosure by undeleting ”0 to” and changing “0” to “0.000”. Add actual page numbers.
- f. Add a description of MTT in Appendix C as paragraph C.3.2.11. (See enclosure 6 R2R3) Change the heading in the enclosure from 220D Draft to 220C. Add the actual page numbers.
- g. Change units of measurement of MTT and T4AT in Appendix E (XNP) from tenths of seconds to seconds. (See enclosure 7 R2R3). Change the heading in the enclosure from 220D Draft to 220C. Add actual page numbers.
- h. Add NBT, JRT, TTTL and JRTTL to Appendix E (XNP) and delete the second definition of “B” (data sensing busy detect). Combine enclosure 9 to this enclosure. Change unit of measurement for all Appendix E MAC values from msec to seconds. (See enclosure 8 R2R3). Change the heading in the enclosure from 220D Draft to 220C. Add actual page numbers.
- i. Update Parameter tables with new values for units of measurement (changing all values to seconds except MUP).
- j. Provide full name and then acronym at first occurrence and use acronym only from then on. .

4. ALTERNATIVE SOLUTIONS: None.

5. SYSTEM CHANGES REQUIRED:

6. CONFIGURATION ITEM DOCUMENTATION CHANGES: MIL-STD-188-220C.

7. IMPACT ON INTEROPERABILITY: None.

8. IMPACT ON RELATED DOCUMENTS: None.

9. IMPLEMENTATION DATES: .Upon approval of this SCC.

10. OTHER CONSIDERATIONS: None.

11. REFERENCES: None.

12. TROUBLE REPORTS (TRs) ADDRESSED IN THIS SCC: None.